



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Antonio Nucci, et al.) Attorney Docket No. 2315/SPRI.104359
) Art Unit: 2633
Serial No. 10/616,637) CERTIFICATE OF MAILING 37 C.F.R. 1.8
Filed: July 10, 2003	I hereby certify that this correspondence is being deposited with the U.S. Postal Service, postage prepaid, as First Class Mail in an envelope addressed to: Mail Stop DD,
Title: METHOD AND SYSTEM FOR IDENTIFYING OPTIMAL MAPPING IN A NETWORK	Commissioner for Patents, P.O. Box 1450, Alexandria, VA

INFORMATION DISCLOSURE STATEMENT

Mail Stop DD Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

In compliance with Applicants duty of disclosure pursuant to 37 C.F.R. Section 1.56, it is requested that this Information Disclosure Statement be entered and that the references listed below and on the enclosed Form PTO-1449 be considered by the Examiner and made of record. Copies of the above-referenced documents are enclosed.

OTHER DOCUMENTS (Including Author, Title, Relevant Pages, and Place of Publication, Date)

- J. Armitage, O. Crochat, J. Y. Le Boudec "Design of a Survivable WDM Photonic Network", *in Proc. INFOCOM* '97, pp.244-252, April 1997.
- O. Crochat, J.Y.Le Boudec "Design Protection for WDM Optical Networks", *IEEE Journal on Selected Areas in* Communication, Vol. 16, n.7, pp.1158-1165, September 1998.
- O. Crochat, J.Y.Le Boudec, O.Gerstel "Protection Interoperability for WDM Optical Networks", *IEEE Transaction on* Networking, Vol. 8, n.3, pp.384-395, June 2000.
- E. Modiano, A. Narula-Tam "Survivable routing of logical topologies in WDM networks", *in Proc. INFOCOM '01* Vol.l, pp. 348-357, Anchorage, Alaska, April 2001.
- F. Glover, E. Taillard and D. De Werra "A User's Guide to Tabu Search", *Annals of Operations Research*, Vol. 41, pp.3-28, 1993.
- V. Kumar "Approximating arc circular colouring and bandwidth allocation in alloptical ring networks", First international Workshop on Approximation ALgorihms for Combinatorial Optimization Problems (APPROX'98),1998.
- A. Nucci, B. Sanso, T. G. Crainic, E. Leonardi, M. Marsan "Design of Fault-Tolerant Logical Topologies in Wavelength-Routed Optical IP Networks", *IEEE Globecom* Proceedings, November, 2001.
- B. Beauquier, J-C. Bermond, L. Gargano, P. Hell, S. Perennes and U. Vaccar "Graph problems arising from wavelength-routing in all-optical networks", 2nd IEEE Workshop on Optics and Computer Science, part of IPP'97, Genova, Switzerland, April 1997. IEEE Press.
- V. Auletta, 1. Caragiannis and P. Persiano "Randomized path coloring on binary trees", 3rd International Workshop on Approximation ALgorihms for Combinatorial Optimization Problems (APPROX'OO), Vol. 1913, pp.60-71, Springer-Verlag, 2000.
- T. Erlebach, K. Jansen, C. Kakalamanis, M. Mihail and P. Persiano "Optimal wavelength routing on directed fiber trees", *Theoretical Computer Science*, Vol. 221, n.1-2, pp.119-137, 1999.

OTHER DOCUMENTS (Including Author, Title, Relevant Pages, and Place of Publication, Date)

D. S. Hochbaum editor "Approximation Algorithms for NP-Hard Problems", *PWS Publishing Company*, 1997.

Eric J. Harder, Sang-Kyu Lee and Hyeong-Ah Choi "On Wavelength Assignment in WDM Optical Networks", *Proceedings of the 4th International Conference on Massively Parallel Processing Using Optical Interconnections (MPPOI'97)*, 1997.

A. Nucci, N. Taft, P. Tmran, H. Zang and C. Diot "Increasing the Link Utilization in IP over WDM Networks" *Opticom* 2002. June 2002.

G. Iannaccone, C. Chuah, R. Mortier, S. Bhattacharyya and C. Diot "Analysis of Link Failures in a Large IP Backbone" in Proc. 2nd ACM Sigcomm Internet Measurement Workshop (IMW), November, 2002.

K. Papagiannaki, S. Moon, C. Fraleigh, P. Thiran, F. Tobagi and C. Diot "Analysis of Measured Single-Hop Delay from an Operational Backbone Network" *in Proc.IEEE Infocom, New York, June 2002*.

Respectfully submitted,

an Dickman

Jean M. Dickman Reg. No. 48,538

JMD/nlm

SHOOK, HARDY & BACON L.L.P. 2555 Grand Boulevard Kansas City, Missouri 64108 TEL. (816) 474-6550 FAX (816) 471-5547

Attorney Docket No. 2315/SPRI.104359

PTO/SB/08B (08-03) Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Inder the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

FEB 1 9 2004

Complete if Known ubstitute for form 1449/PTO **Application Number** 10/616,637 INFORMATION DISCLOSURE Filing Date July 10, 2003 STATEMENT BY APPLICANT First Named Inventor Antonio Nucci, et al. **Art Unit** 2633 (Use as many sheets as necessary) **Examiner Name** Attorney Docket Number Sheet 1 2315/SPRI.104359

		NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	te Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of				
		J. Armitage, O. Crochat, J. Y. Le Boudec "Design of a Survivable WDM Photonic Network", in Proc. INFOCOM '97, pp.244-252, April 1997.				
		O. Crochat, J.Y.Le Boudec "Design Protection for WDM Optical Networks", IEEE Journal on Selected Areas in Communication, Vol. I6, n.7, pp.1158-1165, September 1998.				
<u>-</u> ·		O. Crochat, J.Y.Le Boudec, O.Gerstel "Protection Interoperability for WDM Optical Networks", IEEE Transaction on Networking, Vol. 8, n.3, pp.384-395, June 2000.				
		E. Modiano, A. Narula-Tam "Survivable routing of logical topologies in WDM networks", in Proc. INFOCOM '01 Vo1.I, pp. 348-357, Anchorage, Alaska, April 2001.				
		F. Glover, E. Taillard and D. De Werra "A User's Guide to Tabu Search", Annals of Operations Research, Vol. 41, pp.3-28, 1993.				
		V. Kumar "Approximating arc circular colouring and bandwidth allocation in all-optical ring networks", First international Workshop on Approximation ALgorithms for Combinatorial Optimization Problems (APPROX'98),1998.				
-		A. Nucci, B. Sanso, T. G. Crainic, E. Leonardi, M. Marsan "Design of Fault-Tolerant Logical Topologies in Wavelength-Routed Optical IP Networks", IEEE Globecom Proceedings, November, 2001.	-			
		B. Beauquier, J-C. Bermond, L. Gargano, P. Hell, S. Perennes and U. Vaccar "Graph problems arising from wavelength-routing in all-optical networks", 2nd IEEE Workshop on Optics and Computer Science, part of IPP'97, Genova, Switzerland, April 1997. IEEE Press.				
		V. Auletta, 1. Caragiannis and P. Persiano "Randomized path coloring on binary trees", 3rd International Workshop on Approximation ALgorihms for Combinatorial Optimization Problems (APPROX'OO), Vol. 1913, pp.60-71, Springer-Verlag, 2000.				

Examiner	 Date	
	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08B (08-03) Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449/PTO		ce required to respond to a collection of information unless it contains a valid OMB control number. Complete if Known			
002001111				Application Number	10/616,637
INFORMATION DISCLOSURE				Filing Date	July 10, 2003
STATEMENT BY APPLICANT		First Named Inventor	Antonio Nucci, et al.		
(Use as many sheets as necessary)			ecessary)	Art Unit	2633
(000 00 11011) 011000 00 110000001/y)		Examiner Name			
Sheet	2	of	2	Attorney Docket Number	2315/SPRI.104359

Examiner					
Initials*	No. ¹	the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²		
		T. Erlebach, K. Jansen, C. Kakalamanis, M. Mihail and P. Persiano "Optimal wavelength routing on directed fiber trees", Theoretical Computer Science, Vol. 221, n.1-2, pp.119-137, 1999.			
		D. S. Hochbaum editor "Approximation Algorithms for NP-Hard Problems", PWS Publishing Company, 1997.			
		Eric J. Harder, Sang-Kyu Lee and Hyeong-Ah Choi "On Wavelength Assignment in WDM Optical Networks", Proceedings of the 4th International Conference on Massively Parallel Processing Using Optical Interconnections (MPPOI'97), 1997.	-		
		A. Nucci, N. Taft, P. Tmran, H. Zang and C. Diot "Increasing the Link Utilization in IP over WDM Networks" Opticom 2002. June 2002.			
		G. Iannaccone, C. Chuah, R. Mortier, S. Bhattacharyya and C. Diot "Analysis of Link Failures in a Large IP Backbone" in Proc. 2nd ACM Sigcomm Internet Measurement Workshop (IMW), November, 2002.			
		K. Papagiannaki, S. Moon, C. Fraleigh, P. Thiran, F. Tobagi and C. Diot "Analysis of Measured Single-Hop Delay from an Operational Backbone Network" in Proc.IEEE Infocom, New York, June 2002.			

Examiner	Date
Signature	Considered

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Considered. Include copy or this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.